

**Remarks**

Applicants timely submit this response to the Examiner's Office Action of September 16, 2008 within the shortened statutory period falling on December 16, 2008. The Office Action has been carefully reviewed and the following remarks are made in response thereto.

In this Amendment, claims 23, 29, 31, 96-99, 106, 108-110, 115-116, 118, 122, 129-130, 133-134, 137-138 and 141-142 have been amended. Claims 24-28, 30, 34, 38-45, 57, 100-105, 112-113, 119-120 and 123-128 have been cancelled. New claims 145-153 have been added.

Support for "a dispersion in water" of claim 23 can be found at least at paragraph 28 and 47 of this application and at least at lines 20-28 of page 5 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003, and at least from line 20 of page 3 to line 13 of page 4 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003.

Support for "basic copper carbonate, copper carbonate or copper hydroxide" and "between 0.001 and 25 microns" of claim 23 can be found at least at paragraph 26 of this application and at least at lines 12-18 of page 5 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003, and at least at lines 20-29 of page 3 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003.

Support for "tebuconazole" of claim 23 can be found at least at Table 1 and Examples 3 and 10 of this application and at least Example 6 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003 and at least Table 1 and Examples 3 and 10 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003.

Support for "alkyldimethylbenzylammonium chloride" of claim 23 can be found at least at paragraph 30 of this application.

Support for "dimethyldidecylammonium chloride" of claim 23 can be found at least at paragraph 30 and Example 7 of this application and at least at Example 2 of U.S. Provisional

Application No. 60/461,547, filed Apr. 9, 2003 and at least at Example 7 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003.

Support for "dimethyldidecylammonium carbonate" of claim 23 can be found at least at paragraph 30 and Example 8 of this application and at least at Example 3 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003, and at least at Example 8 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003.

Support for "dimethyldidecylammonium bicarbonate" of claim 23 can be found at least at paragraph 30 of this application.

Support for claims 31, 107, 117, 137 and 141 can be found at least at Examples 3 and 10 of this application and Examples 3 and 10 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003.

Support for "basic copper carbonate" of claims 29, 31, 106, 108-110, 115-116, 122, 129-130, 133-134, 137-138 and 141-142 can be found at least at paragraph 26 of this application, at lines 12-18 of page 5 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003 and lines 20-29 of page 3 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003.

Support for claims 106, 108-110, 116 and 133 can be found at least at Example 2 of this application and at least at Example 2 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003.

Claims 96-99, 106, 108, 116, and 118 have been amended to more clearly claim the subject matter.

In view of the amendments and following remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

**I. Summary of the Interview**

Applicants and Applicants' representatives sincerely thank the Examiner for the courtesy of a telephonic interview on September 12, 2008, in which the Finality of the Office Action of September 16, 2008 was withdrawn, and a personal interview on October 15, 2008. Applicants' representatives, Einar Stole and Soheui Choe, and the Examiner discussed proposed amendment to claims and the cited references in the Office Action, which is embodied in the attached amendment. Applicant's representatives noted that Heuer *et al.* discloses compositions comprising soluble copper compounds where the copper compounds are dissolved as a clear solution and Laks *et al.* discloses biocides that are dissolved in an organic solvent, therefore, are not micronized particles of copper compounds.

**II. Summary of the Office Action**

1. Upon entry of the attached amendment, claims 23, 29, 31, 96-99, 106-111, 114-118, 121-122, 129-153 will be pending.

2. Claims 23-31, 34, 38-45, 96-99 stand provisionally rejected as allegedly unpatentable, under 35 U.S.C. § 101, statutory double patenting, over claims 1-19, 23-35, and 38-45 of copending Application No. 12/081,751.

3. Claims 23-31, 34, 38-45, 96-99 stand provisionally rejected as allegedly unpatentable, under 35 U.S.C. § 101, statutory double patenting, over claims 1-11, 13-19, 23-35 and 38-45 of copending Application No. 12/213,529.

4. Claims 23-45, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 11, 12, and 20 of copending Application No. 11/299,522 in view of Heuer *et al.* (US Patent No. 5,874,025).

5. Claims 23-45, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 12-15 and 17-20 of copending Application No. 11/250,312 in view of Laks *et al.* (US Patent Application No. 2002/0051892).

6. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 1 and 4-13 of copending Application No. 11/471,763.

7. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 6 and 9-13 of copending Application No. 11/849,082.

8. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 9, 13-15, 17 and 23-24 of copending Application No. 11/126,839.

9. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 11-23 of copending Application No. 11/116,152 in view of Heuer *et al.* (US Patent No. 5,874,025).

10. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 11-23 of copending Application No. 11/526,765 in view of Laks *et al.* (US Patent Application No. 2002/0051892).

11. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 54-74 of copending Application No. 12/125,166.

12. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 54-74 of copending Application No. 12/153,167.

13. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 23-48 of copending Application No. 12/071,707.

14. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 25-32 of copending Application No. 12/073,452.

15. Claims 23-31, 57 and 106 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 21, 24, 25, 31, 35, 54, 57, 58, 66-68 and 70 of U.S. Patent No. 7,001,452 in view of Heuer *et al.* (U.S. Patent No. 5,874,025).

16. Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 18-20, 25-29, 43-45, 49-51 and 53 of U.S. Patent No. 6,843,837 in view of Heuer *et al.* (U.S. Patent No. 5,874,025).

17. Claims 23-31, 34-45, 57 and 96-144 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* (U.S. Patent No. 5,874,025) in view of Laks *et al.* (U.S. Patent Application No. 2002/0051892) and Walker (U.S. Patent No. 5,438,034).

18. Claims 116, 129, 133 and 141 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* (U.S. Patent No. 5,874,025) in view of Bath *et al.* (U.S. Patent No. 6,482,814).

19. Claims 116, 122, 126, 127, 130-132, 134-136, 138-140 and 142-144 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* (U.S. Patent No. 5,874,025) in view of Nicholas *et al.* (U.S. Patent No. 5,462,589).

20. No claims were allowed.

### **III. Response to the Office Action**

#### **1. Double Patenting**

##### **A. Provisional Obviousness-Type Double Patenting**

Claims 23-31, 34, 38-45, 96-99 stand provisionally rejected as allegedly unpatentable, under 35 U.S.C. § 101, as claiming the same invention as that of claims 1-19, 23-35, and 38-45 of copending Application No. 12/081,751. The rejection presented by the Examiner is not statutory and therefore should not have been brought under 35 U.S.C. § 101. Applicants respectfully submit that the amended claims presented herein do not claim the same invention as

compending Application No. 12/081,751 and that a clear demarcation exists between the claims of the instant application and those of the referenced application.

Claims 23-31, 34, 38-45, 96-99 stand provisionally rejected as allegedly unpatentable, under 35 U.S.C. § 101, as claiming the same invention as that of claims 1-11, 13-19, 23-35 and 38-45 of compending Application No. 12/213,529. The rejection presented by the Examiner is not statutory and therefore should not have been brought under 35 U.S.C. § 101. Applicants respectfully submit that the amended claims attached hereto do not claim the same invention as compending Application No. 12/213,529 and that a clear demarcation exists between the claims of the instant application and those of the referenced application.

Applicants respectfully request that all provisional, obviousness-type double patenting rejections be held in abeyance, until indication of allowable subject matter, at which time applicants respectfully request withdrawal of all provisional, obviousness-type double patenting rejections applied to the pending claims.

**B. Obviousness-Type Double Patenting—U.S. Patent No. 7,001,452**

Claims 23-31, 57 and 106 are rejected as allegedly unpatentable, under the doctrine of non-statutory, obviousness-type double patenting, over claims 21, 24, 25, 31, 35, 54, 57, 58, 66-68 and 70 of U.S. Patent No. 7,001,452 (the '452 patent) in view of Heuer *et al.* (U.S. Patent No. 5,874,025).

The Examiner alleges that the only difference of claims 23 and 34 and the '452 patent is that the method of the instant invention requires agents selected from emulsifying agents, water repellants and UV stabilizers and Heuer *et al.* teaches using emulsifying agents, water repellants, and a pressure processes for impregnating wood in wood preservative compositions.

The Examiner further alleges that although the conflicting claims are not identical, they are not patentably distinct, because one of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the emulsifying agents, water repellants, and UV stabilizers combined with pressure processes to aid in the penetration of the wood preservative composition.

The claims of the '452 patent do not render claims 23-31, 57 and 106 obvious. In particular, the claims of the '452 patent do not render the pending claims obvious for the reasons provided by the Examiner. For example, claims 23, 29, 31 and 106 have been amended, herein, to recite the limitations of "a dispersion in water of micronized particles of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25 microns" and "one or more organic biocides selected from the group consisting of tebuconazole, alkyldimethylbenzylammonium chloride, dimethyldidecylammonium chloride, dimethyldidecylammonium carbonate, and dimethyldidecylammonium bicarbonate". Claims 24-28, 30 and 57 have been cancelled. Therefore, the rejection under the doctrine of non-statutory obviousness type double patenting is rendered moot, as the pending claims do not recite the emulsifying agents, water repellants, and UV stabilizers, which the Examiner alleges are disclosed by Heuer *et al.*

The '452 patent does not disclose or suggest the claimed invention for at least three reasons. First, claims 21, 24, 25, 31, 35, 54, 57, 58, 66-68 and 70 of the '452 patent are not drawn to compositions comprising micronized particles of copper carbonate or basic copper carbonate, in any form, including "*a dispersion in water.*" In fact, each of claims 21, 24, 25, 31, 35, 54, 57, 58, 66-68 and 70 are drawn to aqueous preservative compositions comprising "a non-polymeric amine compound in an amount sufficient to *solubilize the preservative metal*" such that "no precipitate is present in the aqueous preservative composition". Thus, the preservative metals of each claim of the '452 patent are soluble. Second, the specification of the '452 patent expressly discloses the *prevention of copper precipitation* as a benefit of the disclosed invention. (See last sentence of Background). So, the '452 patent, itself, offers no motivation to modify any of claims 21, 24, 25, 31, 35, 54, 57, 58, 66-68 and 70 to obtain "a dispersion in water of micronized particles of basic copper carbonate, copper carbonate or copper hydroxide" of any of the claims of the instant application. Heuer *et al.* (US Patent No. 5,874,025)—the secondary reference cited in the pending rejection—also does not suggest compositions comprising "a dispersion in water of micronized particles of basic copper carbonate, copper carbonate or copper hydroxide." As discussed in greater detail, below, Heuer *et al.* discloses alkanolamine-free or low-alkanolamine, wood preservatives comprising at least a polyaspartic acid or derivative, a *soluble* copper compound, a triazole compound, optionally at least synergistically complementing fungicide and/or insecticide,

and an emulsifier. Dispersions of micronized particles of copper compound are not contemplated or disclosed by Heuer *et al.* Finally, modifying claims 21, 24, 25, 31, 35, 54, 57, 58, 66-68 and 70 of the '452 patent by Heuer *et al.* does not yield the claimed invention of the instant application. Accordingly, the Examiner has failed to establish *prima facie* obviousness and Applicants, respectfully, request withdrawal of the rejection.

**C. Obviousness-Type Double Patenting—U.S. Patent No. 6,843,837**

Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of non-statutory obviousness type double patenting, over claims 18-20, 25-29, 43-45, 49-51 and 53 of U.S. Patent No. 6,843,837 (the '837 patent) in view of Heuer *et al.* (US Patent No. 5,874,025).

The Examiner alleges that the only difference of claims 23 and 34 and the '837 patent is that the method of the instant invention requires agents selected from emulsifying agents, water repellants and UV stabilizers and Heuer *et al.* teaches using emulsifying agents, water repellants, and a pressure processes for impregnating wood in wood preservative compositions.

The Examiner further alleges that although the conflicting claims are not identical, they are not patentably distinct, because one of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the emulsifying agents, water repellants, and UV stabilizers combined with pressure processes to aid in the penetration of the wood preservative composition.

The claims of the '837 patent do not render claims 23-48, 57 and 96-105 obvious. In particular, the claims of the '837 patent do not render the pending claims obvious for the reasons provided by the Examiner. For example, claims 23, 29, 31 and 96-99 have been amended to recite the limitations of "a dispersion in water of micronized particles of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25 microns" and "one or more organic biocides selected from the group consisting of tebuconazole, alkyl dimethylbenzylammonium chloride, dimethyldidecylammonium chloride, dimethyldidecylammonium carbonate, and dimethyldidecylammonium bicarbonate". Claims 24-28, 30, 32-95 and 100-105 have been



cancelled. Therefore, the rejection under the doctrine of non-statutory obviousness type double patenting is rendered moot, as the pending claims do not recite the emulsifying agents, water repellants, and UV stabilizers., which the Examiner alleges are disclosed by Heuer *et al.*

The '837 patent does not disclose or suggest the claimed invention for at least three reasons. First, claims 18-20, 25-29, 43-45, 49-51 and 53 of the '837 patent are not drawn to compositions comprising micronized particles of copper carbonate or basic copper carbonate, in any form, including "*a dispersion in water.*" In fact, each of claims 18-20, 25-29, 43-45, 49-51 and 53 are drawn to aqueous preservative compositions comprising "a non-polymeric amine compound in an amount sufficient to *solubilize the preservative metal*" such that "no precipitate is present in the aqueous preservative composition". Thus, the preservative metals of each claim of the '837 patent are soluble. Second, the specification of the '837 patent expressly discloses the *prevention of copper precipitation* as a benefit of the disclosed invention. (See last sentence of Background). So, the '837 patent, itself, offers no motivation to modify any of claims 21, 24, 25, 31, 35, 54, 57, 58, 66-68 and 70 to obtain "a dispersion in water of micronized particles of basic copper carbonate, copper carbonate or copper hydroxide" of any of the claims of the instant application. Heuer *et al.* (US Patent No. 5,874,025)—the secondary reference cited in the pending rejection—also does not suggest compositions comprising "a dispersion in water of micronized particles of basic copper carbonate, copper carbonate or copper hydroxide." As discussed in greater detail, below, Heuer *et al.* discloses alkanolamine-free or low-alkanolamine, wood preservatives comprising at least a polyaspartic acid or derivative, a *soluble* copper compound, a triazole compound, optionally at least synergistically complementing fungicide and/or insecticide, and an emulsifier. Dispersions of micronized particles of a copper compound are not contemplated or disclosed by Heuer *et al.* Finally, modifying claims 18-20, 25-29, 43-45, 49-51 and 53 of the '837 patent by Heuer *et al.* does not yield the claimed invention of the instant application. Accordingly, the Examiner has failed to establish *prima facie* obviousness and Applicants, respectfully, request withdrawal of the rejection.

## 2. Claim Rejections under 35 U.S.C. §103(a)

**A. Heuer *et al* in view of Laks *et al.* and Walker**

Claims 23-31, 34-45, 57 and 96-144 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* in view of Laks *et al.* (U.S. Patent Application No. 2002/0051892) and Walker (U.S. Patent No. 5,438,034). Applicants respectfully traverse this rejection.

The Examiner alleges, *inter alia*, that Heuer *et al.* teach novel wood preservatives and a method of preserving wood. The methods of Heuer *et al.* allegedly use a composition comprising an inorganic biocide, such as a copper compound. The Examiner acknowledges that the instant invention claims methods employing compositions comprising micronized particles of a copper compound of a specified size and Heuer *et al.* does not specify the particle size. (page 17 of the Office Action). The reason for this is clear—Heuer *et al.* disclose compositions of soluble copper compounds. Heuer *et al.* discloses alkanolamine-free or low alkanolamine wood preservatives comprising at least a polyaspartic acid or derivative, a copper compound, a triazole compound, optionally at least synergistically complementing fungicide and/or insecticide, and an emulsifier. The stated aim of Heuer *et al.* is to find an alternative to alkanolamines, which are known copper-solubilizing agents. The alternative—polyaspartic acid—functions the same way but reduces leachability and has an allegedly lower environmental impact.

A further aim is to *reduce the loss of alkanol amines, caused by evaporation or leaching, for ecological or work hygiene reasons.* This is best achieved by markedly reducing the amount of alkanol amine (if appropriate down to zero) and by another substance fully or partly replacing the former in its function.

See Summary of Invention; Column 1; lines 47-52

In other words, the polyaspartic acid of the compositions of Heuer *et al.* is disclosed as a beneficial replacement solubilizing agent. The effect of the polyaspartic acid is also disclosed by Heuer *et al.* Namely, the copper compounds of Heuer *et al.* are *dissolved as a clear solution.* (col. 2, ll. 9-10). The copper compounds are expressly disclosed as *dissolved* and no insoluble copper/polyaspartic acid addition products is observed in the copper solution.

Despite the greatly reduced alcohol amine content, the *copper compound is dissolved* as a clear solution. *Nor are any insoluble copper/polyaspartic acid addition products observed*, as is known in some cases for the biuret reaction  $\text{Cu}^{2+}$ + protein.

Detailed Description of the Preferred Embodiments; Column 2; lines 9-13

Heuer *et al.* disclose the copper source as water-soluble or water-insoluble copper (Column 2; lines 38-43). These compounds, however, are dissolved by various means (Column 18; lines 19-27) to produce the disclosed solutions wherein a *copper compound is dissolved* as a clear solution. (Column 2; lines 9-13). Therefore, as the Examiner admits in the Office Action (page 17 of the Office Action of September 16, 2008), Heuer *et al.* does not contemplate, suggest or teach a dispersion in water of micronized particles of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25 microns in water or a milled copper carbonate with a particle size of between 0.001 and 25 microns of pending claims in preserving a wood product.

Laks *et al.* does not remedy this deficiency. The Examiner alleges that a skilled person would be motivated to make a micronized particle for penetrating wood from the combination of Laks *et al.* and Heuer *et al.* because Laks *et al.* teaches a method for incorporating biocides into wood, in which the particles size of the components is allegedly 50-400 nanometers. Laks *et al.*, however, is specifically directed to solving the problem of introducing biocides of limited solubility into wood. In particular, Laks *et al.* indicates that, according to the thinking in the art, solubility was of such importance that biocides having low solubility in organic solvents, such as chlorothalonil, had to be dissolved in toxic hydrocarbon oils before application to wood. (See paragraphs 4 and 5 of Laks *et al.*) Rather than solving the problem by the use of particles of the biocide itself, Laks *et al.* teaches the formation of polymer particles containing a *dissolved organic biocide*, with care taken to select the polymer properties such that the particle gives the appropriate rate of diffusion of the dissolved biocide from the particle (see paragraphs 22 and 23). Essentially, Laks *et al.* replaces the carrier in which the particles are insoluble with a polymer in which the biocide can be dissolved.

Laks *et al.* also disclose that the biocides are “chosen according to (1) the target organism; (2) ***solubility characteristics, that is high solubility in the particle forming solvent***; (3) stability to the temperature and pH used to polymerize the monomer of choice... .” Laks *et al.* discloses biocides that ***are dissolved in an organic solvent*** and ***are not micronized particles***. Examples in Laks *et al.* include tebuconazole dissolved in methanol (Example 1A) and chlorothalonil dissolved in N-methylpyrrolidone (Example 1A). The dissolved solutes of Laks *et al.* are not micronized particles of an inorganic or organic biocide.

On the whole, Laks *et al.* does not teach that micronized particles of biocides can effectively preserve wood. Because Heuer *et al.* does not teach a dispersion in water of micronized particles of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25 microns in water or a milled copper carbonate with a particle size of between 0.001 and 25 microns of the pending claims in preserving a wood product, the combination of Heuer *et al.* with Laks *et al.* does not yield the claimed particles of copper carbonate, basic copper carbonate or copper hydroxide of the instant application.

Moreover, Laks *et al.* is completely silent as to “***a milled copper carbonate or basic copper carbonate***” of claims 116-122, or “micronized particles of copper carbonate ***milled*** to between 0.05 and 1 microns” of claims 133-136 and 141-144. Milling of the biocides is not contemplated or disclosed by Laks *et al.* First, the biocides of Laks *et al.* are dissolved in an organic solvent. Therefore, milling would serve no purpose with regard to the biocides. Second, milling of the polymeric particles—formed by preparing the polymeric structure in a solution of a dissolved biocide—would likely distort or destroy the polymeric structure. Therefore, Applicants respectfully submit that the Examiner’s combination of Heuer *et al.* and Laks *et al.* do not teach every element of the pending claims, nor do they render the claimed invention obvious.

The Examiner also alleges that Walker teaches the use of didecyltrimethylammonium carbonate and didecyltrimethylammonium bicarbonate as a preferred carbonate quaternary compound for use as wood preservatives. Walker does not disclose the claimed invention. Walker is completely silent as to “***a dispersion in water of micronized particles*** of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25

microns in water or *a milled copper carbonate* with a particle size of between 0.001 and 25 microns” of the pending claims. Walker teaches quaternary ammonium carbonate compositions and preparation using the indirect synthesis of C<sub>1</sub>-C<sub>20</sub> alkyl or aryl-substituted alkyl, C<sub>8</sub>-C<sub>20</sub> alkyl quaternary ammonium carbonate compositions from corresponding quaternary ammonium chlorides and methods for preserving a wood substrate using the quaternary ammonium carbonate compositions.

Applicant respectfully submits that the Examiner’s combination of references do not yield the claimed invention. Accordingly, withdrawal of the rejection is respectfully requested.

**B. Heuer *et al.* in view of Bath *et al.***

Claims 116, 129, 133 and 141 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* in view of Bath *et al.* (U.S. Patent No. 6,482,814). Applicants respectfully traverse this rejection.

As discussed above, Heuer *et al.* do not contemplate, suggest or teach *a dispersion in water of micronized particles* of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25 microns in water or *a milled copper carbonate* with a particle size of between 0.001 and 25 microns of the pending claims.

Bath *et al.* does not disclose the claimed invention and does not remedy this deficiency. Bath *et al.* teaches a biocidal composition comprising a N-alkyl-1,2-benzisothiazolin-3-one and a metal complex of a cyclic thiohydroxamic acid for inhibiting the growth of microorganisms, especially deteriogens of plastics materials in soil burial conditions. The composition of Bath *et al.* comprises benzisothiazolinone formula and a metal complex of a cyclic thiohydroxamic acid. The composition can be applied to dry plastic materials with, optionally, a plasticizer or stabilizer. The Examiner alleged that Bath *et al.* teaches biocidal composition containing solid component can be prepared by any means known to the art including bead, pebble or ball milling the solid in the liquid carrier and the desired particle size of the solid is less than 20 microns. Applicants respectfully point out that Bath *et al.* does not disclose QUAT (quaternary ammonium compounds) or tebuconazole, or compositions comprising copper with QUAT or

tebuconazole. Biocides of Bath *et al.* are limited to specific benzisothiazolinone and metal complex of a cyclic thiohydroxamic acid. Bath *et al.* does not disclose any micronized particles of copper compounds. Bath *et al.* is completely silent as to “*a dispersion in water of micronized particles*” of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25 microns in water or *a milled copper carbonate* with a particle size of between 0.001 and 25 microns” of the pending claims.

Applicants respectfully submit that the Examiner’s combination of Heuer *et al.* and Bath *et al.* does not teach every element of the pending claims, nor do they render the claimed invention obvious. Accordingly, withdrawal of the rejection is respectfully requested.

**C. Heuer *et al.* in view of Nicholas *et al.***

Claims 116, 122, 126, 127, 130-132, 134-136, 138-140 and 142-144 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* in view of Nicholas *et al.* (U.S. Patent No. 5,462,589). Applicants respectfully traverse this rejection.

As discussed above, Heuer *et al.* does not contemplate, suggest or teach *a dispersion in water of micronized particles* of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25 microns in water or *a milled copper carbonate* with a particle size of between 0.001 and 25 microns of the pending claims.

Nicholas *et al.* does not disclose the claimed invention and does not remedy this deficiency. Nicholas *et al.* teaches synergistic biocidal compositions comprising a copper salt and an organic biocide selected from the group of tribromophenol, its salts and chelates, and sodium-omadine, its salts and chelates for wood treatment to improve fungi resistance. Contrary to the Examiner’s allegation, dispersions of micronized particles of copper compound are not contemplated or disclosed by Nicholas *et al.*

Nicholas *et al.* does not disclose any particles of biocides, or copper compound. The copper compound of Nicholas *et al.* is *dissolved in the organic solvent*. (col. 3, ll. 33-47). Nicholas

*et al.* does not contemplate, suggest or teach that copper salt and sodium omadine may be used as a dispersion of micronized particles in water.

Nicholas *et al.* discloses that according to the invention:

*Although copper salt and sodium omadine, individually, are both water soluble, combining these two compounds results in a reaction that forms a water-insoluble complex that precipitates in water. A suitable organic solvent can be used to dissolve the complex and form the present preservative composition for treating wood. Alternatively, the complex can be emulsified in water by using a small amount of organic solvent and a suitable surfactant.* First, the complex is dissolved in the organic solvent. Then the surfactant is added and an emulsion is formed in water by thoroughly stirring the mixture. Various known combinations of surfactants and solvents can be used to produce stable emulsions for treating wood. The preparation and treatment using a copper-sodium omadine emulsion is the least expensive method.

Column 3; lines 33-47

Therefore, the compositions of Nicholas *et al.* is not a dispersion of micronized particles between 0.001 and 25 microns in water. Applicants respectfully submit that the Examiner's combination of Heuer *et al.* and Nicholas *et al.* does not teach every element of the pending claims, nor do they render the claimed invention obvious. Accordingly, withdrawal of the rejection is respectfully requested.

#### **IV. Conclusion.**

Applicant believes that the above-referenced application is in condition for allowance. Reconsideration and withdrawal of the outstanding rejections and early notice of allowance to that effect is respectfully requested.

**EXCEPT** for issue fees payable under 37 C.F.R. § 1.18, the Director is hereby authorized by this paper to charge any additional fees during the entire pendency of this application, including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 13-3250, reference No. 38184.03402. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).


If the Examiner finds that a telephone conference would further prosecution of this application, the Examiner is invited to contact the undersigned at 202-835-7523.

Respectfully submitted,

**MILBANK, TWEED, HADLEY & McCLOY LLP**

Date: October 24, 2008

By:



Soheui Choe

Limited Recognition No.: L0309

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